

WHAT IS CLAIMED IS:

1. A lithographic projection apparatus, comprising:
  - a substrate table configured to hold a substrate;
  - a first station at which measurement of the substrate may be performed;
  - a second station at which the substrate may be exposed;
  - a displacement measuring system configured to measure displacements of the substrate table in the first and second stations;
  - a substrate table transfer device configured to transfer the substrate table between the first and the second stations;
  - a radiation system, associated with the second station, configured to provide a beam of radiation;
  - a support configured to support a patterning device, the patterning device configured to pattern the beam according to a desired pattern; and
  - a projection system configured to project the patterning beam onto a target portion of the substrate when the substrate is at the second station, wherein the displacement measuring system is configured to continuously measure displacements of the substrate table in at least two directions during transfer between the first and second stations.
2. A lithographic projection apparatus according to claim 1, wherein the transfer device is a planar motor.
3. A lithographic projection apparatus according to claim 1, further comprising:
  - a first measurement system in the first station configured to measure a first relative position of the substrate to the substrate table;
  - a second measurement system in the second station configured to measure a second relative position of the patterning device relative to its support;
  - a storage device configured to store the first and second relative positions; and
  - a control unit configured to calculate an exposure position based on the first and second relative positions.
4. A lithographic projection apparatus according to claim 3, wherein at least one of the first and second measuring systems is also an alignment system configured to align the at least one substrate in the first and second stations, respectively.
5. A lithographic projection apparatus according to claim 1, wherein the displacement measurement system comprises interferometers.

6. A device manufacturing method, comprising:
  - providing a substrate that is at least partially covered by a layer of radiation-sensitive material;
  - locating the substrate on a substrate table in a first station, the first station being a station in which measurement of the substrate may be conducted;
  - transferring the substrate table to a second station, the second station being a station in which the substrate may be exposed;
  - measuring displacements of the substrate table in the first and second stations;
  - providing a beam of radiation using a radiation system;
  - using a patterning device to endow the beam with a pattern in its cross-section;
  - projecting the patterned beam of radiation onto a target portion of the layer of radiation-sensitive material while the substrate is in an exposure position in the second station; and
  - continuously measuring displacements of the substrate during transferring.
7. A device manufacturing method according to claim 6, further comprising:
  - measuring and storing a first relative position of the substrate to the substrate table, while the substrate table is in the first station;
8. A device manufacturing method according to claim 7, further comprising:
  - measuring and storing a second relative position of the patterning device relative to a support.
9. A device manufacturing method according to claim 8, further comprising:
  - calculating an exposure position using the stored first and second relative locations; and
  - using the exposure position as a destination during the transferring.
10. A computer program comprising a program code that, when executed on a control unit configured to control a lithographic projection apparatus, instructs the lithographic projection apparatus to perform the method of claim 6.
11. A computer program comprising a program code that, when executed on a control unit configured to control a lithographic projection apparatus, instructs the lithographic projection apparatus to perform the method of claim 7.
12. A computer program comprising a program code that, when executed on a control unit configured to control a lithographic projection apparatus, instructs the lithographic projection

apparatus to perform the method of claim 8.

13. A computer program comprising a program code that, when executed on a control unit configured to control a lithographic projection apparatus, instructs the lithographic projection apparatus to perform the method of claim 9.
14. A device manufactured by the method of claim 6.
15. A device manufactured by the method of claim 7.
16. A device manufactured by the method of claim 8.
17. A device manufactured by the method of claim 9.